Manual for Installation

eSENSE® (-D)

CO_2 transmitter

eSENSE®

eSENSE®

General

The IAQ-sensor product eSENSE® (sensor for wall mounting) is designed to measure carbon dioxide (CO_2) in rooms. Option -D displays the measured CO_2 value in ppm (parts-per-million) on the LCD.

The units are designed for connecting to Direct Digital Control (DDC) with 0-10V or 2-10V signal inputs. The two parallel signal outputs OUT1 (0-10V) and OUT2 (2-10V) give linear signal voltages corresponding to the measuring range 0-2000 ppm carbon dioxide. The 2-10V output also indicates the *status* by setting the output voltage to 1V when the sensor self diagnostics detects any error.

To open the wall mounted housing

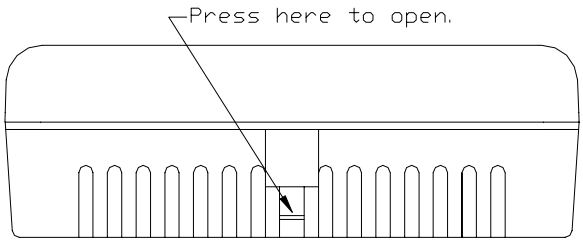

Figure 1. . Closed housing seen from above. The housing is opened by pressing a screw driver on the locking hook. The locking hook is then released.

Electrical connections

The power supply has to be connected to G+ and G0. G0 is considered as system ground. *The same ground reference has to be used for the eSENSE® unit and for the DDC/signal receiver.*

PLEASE NOTE!
The same ground reference has to be used for the eSENSE® unit and for the control system!

Terminal	Function	Elektrical data	Remarks
G+	Power (+)	24 VAC/DC+ (+-20%), 2W	
G0	Power ground (-)	24 VAC/DC-	System voltage reference
OUT1	Analogue output 1 (+)	0-10 VDC	0-2000 ppm CO_2
OUT2	Analogue output 2 (+)	2-10 VDC 0,9-1,1 VDC	0-2000 ppm CO_2 Status = NOT READY or ERROR

Table I. Connections of the main terminal of eSENSE®

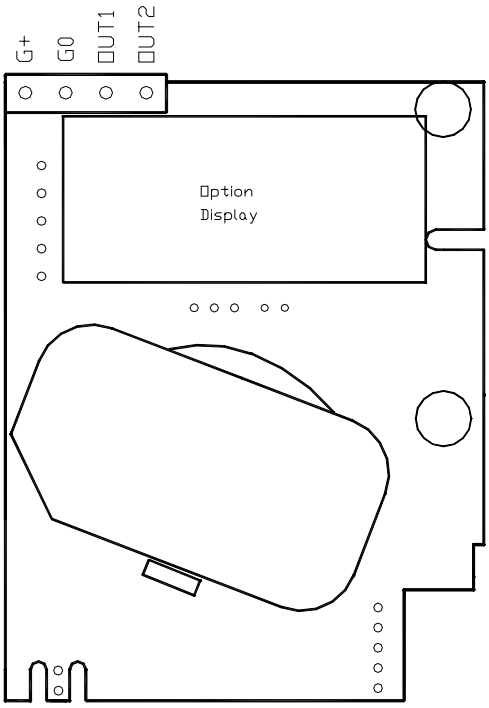

*Figure 2. The **eSENSE®** and **eSENSE®** - D PCB*

Self diagnostics

The system contains complete self diagnostic procedures that is executed automatically when the sensor is in operation. Sensors with display show a wrench if an error is found. The wrench is shown during the first seconds after power up and if the measuring range 2000 ppm is exceeded. The output OUT2 indicates the same information by setting the output voltage to 1V.

PLEASE NOTE!
The sensor accuracy is defined at continuous operation (at least 3 weeks after installation).

This product is in accordance with the EMC Directive 89/336/EEC and the Low Voltage Directive 73/23/EEC including amendments by the CE-marking Directive 93/68/EEC
The product fulfils the following demands: EN50081-1, EN55011(B) EN50082-2, EN61000-4-2,-3,-4,-5, Level3

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